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(54) **APPARATUS, SYSTEM AND METHOD FOR FLUID DELIVERY**

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(57) **ABSTRACT**

A fill adapter system for an infusion pump assembly. The system includes a reusable fill adapter base, the base including a volume control mechanism to adjust an available fill volume of a reservoir of the infusion pump assembly and a pump mechanism configured to pump air into a fluid vial. The system also includes a vial adapter assembly including a first needle configured to penetrate a septum of the fluid vial for fluidly coupling the pump mechanism to the fluid vial and a second needle having a first end configured to penetrate the septum of the fluid vial and a second end configured to penetrate a septum of the reservoir of the infusion pump assembly to allow transfer of fluid from the fluid vial to the reservoir of the infusion pump assembly in response to air being pumped into the fluid vial and a needle carriage adapted to carry the first needle and the second needle, wherein the needle carriage slidably attached to the interior of the vial adapter assembly, wherein the needle carriage adapted to slide from a vial end of the vial adapter to a receptacle end of the vial adapter.